

Date: Tue, 23 Feb 93 09:33:25 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #247
To: Info-Hams

Info-Hams Digest Tue, 23 Feb 93 Volume 93 : Issue 247

Today's Topics:

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 antenna (2 msgs)
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 E-skip database
Gain equations for pyramidal horn antennas
 Info needed on GPS
 list of lists
 MFJ qrp?
 Old tube AM/FM table top Radio
 OSCAR info
Please include your return email address!
 Portable HF antennas...
 Tokyo Hi-Power HF Talkie

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 23 Feb 1993 13:37:08 GMT
From: pacbell.com!att-out!cbfsb!cbnewsb.cb.att.com!feg@network.UCSD.EDU
Subject: 5/8 Wavelength Antenna Theory?
To: info-hams@ucsd.edu

In article <8855@tekig7.PEN.TEK.COM> royle@tekig6.PEN.TEK.COM (Roy W Lewallen)
writes:

>
>

>The 5/8 wave antenna has concentrated most of our energy just where it'll
>be attenuated the most, so it loses much of its advantage when placed over
>real ground. Here are some figures:

>

> Advantage of 5/8 wave antenna over 1/4 wave, dB:

>

> deg.	poor	Elev. angle average	Ground type very good
--------	------	------------------------	--------------------------

>

> 0	4.5	4.5	4.5
-----	-----	-----	-----

> 5	0.7	-0.6	-0.2
-----	-----	------	------

> 10	1.9	0.7	0
------	-----	-----	---

>

>So, there went our wonderful 3 dB gain. Oh, well, if we just spent a lot of
>time and money to more than double our antenna height, the placebo effect
>is sure to more than compensate.

>

>Roy Lewallen, W7EL

>ARRL Technical Advisor

Amen to all that Roy has explained about the 5/8ths w.l. vertical.

What is behind much of the use of 5/8ths verticals at UHF is an inappropriate extrapolation of the use of this antenna at AM broadcast medium wavelengths. At these much lower frequencies, the flattening of that bagel-like pattern does take place, due to the lower ground losses, and the increased signal over the longer ground wave area served by that station is worth the markedly increased cost of the antenna. This is particularly so for large sprawling urban areas. The greater the listening area, the greater the charge for advertising to the station.

Forrest Gehrke feg@dodger.att.com k2bt

Date: Tue, 23 Feb 1993 01:39:54 GMT

From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@network.UCSD.EDU

Subject: 5/8 Wavelength Antenna Theory?

To: info-hams@ucsd.edu

In rec.radio.amateur.misc, fred-mckenzie@ksc.nasa.gov (Fred McKenzie) writes:

>It seems that there are actually two antennas that each are called "5/8".

>These antennas have a vertical element working against a ground plane.

>One is the true "5/8" wavelength. Its claim to fame is that its feedpoint
>impedance has a 50 ohm resistive component, and a capacitive reactance

>component. It can be fed with 50 ohm Co-Ax through an inductance whos
>reactance cancels the capacitive component.

A 5/8 wave antenna has HIGHER than 50 ohm impedance. That's why you
need to tap down on the loading coil to feed it with 50-ohm coax.

>The other "5/8" antenna actually has a 0.58 wavelength vertical element,
>rather than 0.625. It is usually fed with a grounded, tapped coil:

A .58-wave antenna would have an even higher impedance and lower gain
than a 5/8 wave. The only advantage would be smaller physical size.

AL N1AL

Date: Tue, 23 Feb 1993 14:39:30 GMT
From: usc!sol.ctr.columbia.edu!news.cs.columbia.edu!popovich@network.UCSD.EDU
Subject: antenna
To: info-hams@ucsd.edu

In article <C2wLp1.n30@feenix.metronet.com> marcbg@feenix.metronet.com (Marc
Grant) writes:

>I saw a book that the ARRL publishes on putting up antennas in difficult
>places. You may look in the March issue of QST where the ARRL advertises
>its books for more info - it was a full page ad and had a attention
>getting camoflage background.

Hmmm. "Attention getting camo[u]flage." An interesting concept. :-)
I know what you mean, but the oxymoron seems worth a chuckle.
-Steve

Date: Tue, 23 Feb 1993 13:34:13 GMT
From: usc!cs.utexas.edu!hermes.chpc.utexas.edu!news.utdallas.edu!
feenix.metronet.com!marcbg@network.UCSD.EDU
Subject: antenna
To: info-hams@ucsd.edu

In article <1mb3oh\$ini@hamblin.math.byu.edu> tatsuya@sofya.math.byu.edu writes:
>I am an apt. dweller and I wish like to know the way to do dxing. Does anyone
>have any idea how to it, looking for an antenna. I have got ts-520s.

I saw a book that the ARRL publishes on putting up antennas in difficult
places. You may look in the March issue of QST where the ARRL advertises
its books for more info - it was a full page ad and had a attention
getting camoflage background.

Now, for my experience:

It depends where you are located. Do you have a balcony? Are you in a hi-rise or a two or three story complex? Can you string a wire accross the complex some where (a very thin wire is quite unnoticeable).

Of course, you could put up a simple 10 meter dipole in your apartment. I've even seen people string wire along the perimeter of the room (by the ceiling).

If you have a balcony your options increase. You could buy a mobile HF antenna. You could even buy one and mount it out a window. Naturally, you won't have the car as a ground plane, but you could fake a ground plane with a large metal plate or just go without a ground plane. You won't be that efficient, but it will work. There are many options, but they all depend on your particular configuration.

--
Marc Grant | Internet: marchbg@feenix.metronet.com
POB 850472 | Packet: n5mei@n5lidd.#ntx.tx.usa.na
Richardson, TX 75085-0472 | Amateur Radio Station N5MEI

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Date: 23 Feb 93 17:15:21 GMT
From: news-mail-gateway@ucsd.edu
Subject: DX LISTENING
To: info-hams@ucsd.edu

All the Ham Operators,

What in the world is happening to shortwave broadcasting in what used to be the USSR?

Queries Brian Grason,

Raleigh, NC in a recent letter. "When I listen in on some of the DX programs, like Radio nederlands' Media Network, they talk about showtwave stations in Rusia.

I'm surely confused."

Brian's not the only one feeling a bit perplexed. The shortwave situation in the former USSR has been very confusing since that country's breakup. There seem to be dozens of new Russian stations, most of which are reported to be broadcast-ing in the Russian language, but some do have limited English programming. Actually, according to the most reliable information available, there are very few genuinely independent Russian SW stations, if we define stations in the generally accepted sense.

What we have in growing numbers are independent program producers who lease air time on various government-owned stations, which are part of the vast transmitter network left over from the "pre-democracy" days of Soviet international broadcasting. Most of those new program services are the work of present and former employees of the now defunct Gostelradio (the former Soviet broadcasting agency). They are intended as commercial operations, but it's unclear just how much advertising they have been able to attract thus far. The largest of those "independent" broadcasters, supposedly, is Radio Ala, which began broadcasting in October 1991. Its programming, in the Russian language, consists mostly of music, with newscasts on the quarter hour. Ala, says N. Dyomina, the station's letters editor, means "wings, from the Latin." The program has its own newsgathering and writing staff, and claims to have as many as 75-million listeners in Russia.

It broadcasts its program from transmitters, leased from the Russian government, at Moscow, St. Petersburg (formerly Leningrad), Ekaterinburg, and Kalingrad at various times and at up to about 12 hours a day or more. Some frequencies to try are:

7,370 7,400 11,685 11,965
12,030 and 15,255khz.

Radio Ala's address is P.O. Box 159, 125047 Moscow, Russia.

And that is it from Scott Caden Ream KB2HKR

Date: Tue, 23 Feb 1993 03:29:36 -0400
From: usc!howland.reston.ans.net!agate!linus!alliant!merk!harvee.billerica.ma.us!
esj@network.UCSD.EDU
Subject: e-mail address for president
To: info-hams@ucsd.edu

In <BENCZE.93Feb22122851@isl.stanford.edu>, William J. Bencze writes:

> 75300.3115@Compuserve.com
> CLINTON PZ on America Online
^^ should be CLINTONPZ@aol.com for us
internet folks.

--- eric

--

HOME: esj@harvee.billerica.ma.us HAM ka1eec

WORK: 617.630.4687 (w) esj@ruby.polaroid.com
source of the public's fear of the unknown since 1956

Date: Tue, 23 Feb 1993 13:31:45 GMT
From: usc!wupost!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
Subject: e-mail address for president
To: info-hams@ucsd.edu

In article <BENCZE.93Feb22122851@isl.stanford.edu> bencze@isl.stanford.edu
(William J. Bencze) writes:

>
> Jock Gill
> Electronic Publishing
> Public Access E-mail
> The White House
> Washington, D.C.
>
> 75300.3115@Compuserve.com

This is Jock Gill's personal Compu\$erve mailbox. Compu\$erve starts
bouncing messages after the first 150 or so accumulate in the box.
A bunch of folks over in sci.space have been hammering this thing
about poor Fred and it seems to stay full all the time.

Gary

--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: 23 Feb 93 09:35:19 MDT
From: dog.ee.lbl.gov!hellgate.utah.edu!cc.usu.edu!slmdj@network.UCSD.EDU
Subject: e-mail address for president
To: info-hams@ucsd.edu

I had originally replied directly to the original poster, but since there seems
to be some other interest, I'll post it to the net. :)

Send your respectful comments and opinions as a citizen of this
great land to:

75300.3115@Compuserve.com

Date: 23 Feb 93 12:45:04 GMT
From: news-mail-gateway@ucsd.edu
Subject: E-skip database
To: info-hams@ucsd.edu

>Date: Mon, 22 Feb 1993 19:58:00 GMT
>From: nsisrv!news1.gsfc.nasa.gov!NewsWatcher!user@ames.arpa
>Subject: E-SKIP DATA BASE/6&2 METERS
>To: info-hams@ucsd.edu

>Have been keeping E-SKIP data base for 1973-1992 for VHF. Also have separated
>for 144Mc. only. Both combined is about 24 pgs. Will attempt to send ovr BB
>free if anyone has a need. DICK. This is on MAC now. W3ZZ has my data base
>converted to IBM also. Objective has narrowed down to looking 2 Meter E-SKIP
>predictions based on Solar Coronal hole crossings.

This database ought to be interesting! Have you examined it in the light
of the QST article by Emil Pocock, W3EP & Pat Dwyer, WA5IYX (last Spring)?
Their data indicated a strong 5-day periodicity over 11 years. The cause(s)
of the rhythm are not apparent.

Questions:

- 1) What are coronal hole crossings?
- 2) Are they periodic?
- 3) What is your name? (it wasn't on the Info-Hams posting) :)

Michael Owen W9IP
MROWEN@STLAWU

Date: Tue, 23 Feb 1993 16:29:21 GMT
From: mentor.cc.purdue.edu!noose.ecn.purdue.edu!sclera.ecn.purdue.edu!
cromwell@purdue.edu
Subject: Gain equations for pyramidal horn antennas
To: info-hams@ucsd.edu

I'm looking for an equation to provide the gain of a pyramidal horn.
In other words,

$G(\omega, \theta, a, b, l)$, where:

ω, θ : angles from axis in H-plane and E-plane
 a, b : aperture dimensions in H, E planes
 l : length of horn (flange-to-aperture, say, or
theoretical-intersection-of-sides-to-aperture,
more likely)

I've checked various antenna handbooks, but they tend to give the field-strength equations, and in terms of Fresnel integrals. Being a computer weenie, not a fields-and-waves guru, I'm a bit timid about just jumping to conclusions about how to compute the Fresnel integrals and how to get gain from the field strength terms.

The ultimate goal would be a routine that would take a, b, and l as arguments, and produce polar plots of H-plane and E-plane gain.

Send e-mail, and I'll summarize. Thanks!

Bob KC9RG
cromwell@ecn.purdue.edu (Internet)
cromwell%ecn@purccvm (Bitnet)
....pur-ee!cromwell (UUCP)

Date: 22 Feb 93 22:15:17 +0100
From: usc!howland.reston.ans.net!gatech!rpi!ghost.dsi.unimi.it!37.1!
sssup1.sssup.it!fpc@network.UCSD.EDU
Subject: Info needed on GPS
To: info-hams@ucsd.edu

Someone has informations on the operating principle of GPS (Global Positioning Sistem) ?
Thanks in advance.

Francesco Paolucci
fpc@sssup1.sssup.it

Date: 23 Feb 93 13:54:10 GMT
From: news-mail-gateway@ucsd.edu
Subject: list of lists
To: info-hams@ucsd.edu

The "list of lists" is available via anonymous ftp on ftp.nisc.sri.com in netinfo/interest-groups.

Jim Goodrich - WA4VGZ
goodric@hsdwl.utc.com

Date: 23 Feb 93 06:58:18 CST

Dan Fields
Pacer Software, Inc.
1900 West Park Drive, Suite 280
Westborough, Massachusetts 01581
fields@pacersoft.com
(508) 898-3300

+++++

Date: 23 Feb 93 13:43:06 GMT
From: news-mail-gateway@ucsd.edu
Subject: OSCAR info
To: info-hams@ucsd.edu

Kevin Purcell asked about using FM transmitters to access Mode A satellites as suggested by Gary. My first attempts at Oscar operations, back on A07 or 8 were done by taking my 2 meter HT with appropriate crystal and a 40 watt brick amp and sending CW with the PTT bar. I sure sounded like I had a lousy fist an I didn't make any contacts then, but i was able to hear my signal returned from the bird.

More recently I tried accessing Mode B on OSCAR 13 using my dual band HT. (I have an oscar setup based on an FT736 - this was just to see what could be done). With a 14 turn helix on 435 for an uplink antenna, I could clearly

hear my returned signal at 5 watts, and it provided what would be a useable signal level at 1 watt. However the chirp was pretty bad - I wouldn't consider using it for normal use. I couldn't copy any FM modulation, and that isn't encouraged on the satellites anyway because of the poor use of transponder power but for on off keying it was definately within the range of usable signals.

My thought would be that you could improve the signal by using a following power amplifier and keying that. You wouldn't want to key the amplifier enable line as that would cause the relay to switch back and forth, rough on the relay, and on the HT's output transistor as it watches the relay open and close. But if you went inside the amp and keyed the power to the transistor directly you would let the HT come up and be stable, while still being able to key it for cw. You might have considerable backwave though with a single stage amp. Still, it's worth a thought either on 2 meters for mode A access or 70cm for Mode B CW.

AS far as shifting frequency, I think most of the FM rigs are AC coupled in the audio chain, but if you find one that is DC coupled, the ability to bend the frequency with a pot attached to the mic jack has appeal. If you want to do surgery, you can almost certainly find a point in the radio where a DC voltage can cause a frequency shift.

As far as would people mind tracking you - well, drifting across other QSO's would be an issue, but from an operators standpoint - if someone was using some unique method of getting on the satellite, I'd certainly follow him around in frequency to chat about what he'd done. :-)

Sometime in my 'copious free time' I want to play with this idea some more.

kevin - WB2EMS

Date: 23 Feb 93 16:36:52 GMT
From: news-mail-gateway@ucsd.edu
Subject: Please include your return email address!
To: info-hams@ucsd.edu

I have a simple request for everyone who posts stuff to this discussion group: PLEASE include your return email address in the text (body) of every message you post!

You might ask "why?"... It appears that not all the methods by which this discussion group is accessed can see all the header information your system generates when you post. I subscribe via the info-hams mailing list sent out by ucsd.edu and I think I'm missing that information. (Yes, I see a usually-long uucp-type path on every posting, but some of them seem to point back to news/nntp systems rather than to users.)

So, at the end of each posting where you normally put in your name, please take an extra few seconds to also put your email address.

I've seen several requests I could have helped with, but the author asked for email, didn't specifically include a return address, and the long uucp path didn't look good. I suppose I could have posted a "Message for Hiram Percy Maxim W1AW" asking him to send me his email address, but I know it is a breach of netiquette and a big no-no to do a posting for one-to-one personal messages...

73 de Scott W01G
=====
Scott Sminkey
Xyplex, Inc.
330 Codman Hill Road
Boxborough, MA 01719
sasminkey@eng.xyplex.com

Date: Tue, 23 Feb 1993 16:05:18 GMT

From: usc!howland.reston.ans.net!spool.mu.edu!uwm.edu!linac!att!cbnews!jeffj@network.UCSD.EDU
Subject: Portable HF antennas...
To: info-hams@ucsd.edu

In article <Pine.3.05.9302221905.A27973-a100000@uaafhp.uark.edu> Peter Laws <plaws@uaafhp.uark.edu> writes:

> I ask this with great trepidation, but here goes anyway....
>
> I need the simplest HF antenna that covers the most bands.
>
> Simple, right?
>
> Well, not really.
>
> Specifically 1) I would like it to cover 3 or more bands (*which* bands
>is not important). 2) It will *not* be used with a tuner 3) It must fit
>in a regular sized suitcase, along with my (new) IC725.
>
> I thought of a TNT Windom, but everyone says they don't work. Except,
>of course, the guy at Antennas West. Several have suggested a trap
>dipole. Any thoughts? Sources? Price I can expect?

A trapped dipole is your best bet. However you might want to reconsider using a antenna with a tuner. A G5RV or a McCoy (132 feet fed with ladder line) would be a good choices. 73!

Jeff

--

Jeff Jones AB6MB		Nickel Back: What you get when you ask free
jeffj@seeker.mystic.com		agents to give you a million
Infolinc BBS 415-778-5929		dollars worth of effort.

Date: Tue, 23 Feb 1993 13:25:04 GMT
From: usc!cs.utexas.edu!hermes.chpc.utexas.edu!news.utdallas.edu!feenix.metronet.com!marcbg@network.UCSD.EDU
Subject: Tokyo Hi-Power HF Talkie
To: info-hams@ucsd.edu

Just when we were overwhelmed by Kenwood's TS-50, I noticed that Tokyo Hi-Power had an ad in the March QST for a Hand Held HF rig which has 40, 15, and 6 meters.

Anyone have the scoop on this thing? Has anyone see, touched, or smelled it? How about performance info?

Marc Grant		Internet: marcbg@feenix.metronet.com
POB 850472		Packet: n5mei@n5l1dd.#ntx.tx.usa.na
Richardson, TX 75085-0472		Amateur Radio Station N5MEI

[illegible]

End of Info-Hams Digest V93 #247
